



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
 United States Patent and Trademark Office
 Address: COMMISSIONER FOR PATENTS
 P.O. Box 1450
 Alexandria, Virginia 22313-1450
 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,265	03/12/2004	Willi Niemerg	677/41956	5875

23646 7590 04/13/2007
 BARNES & THORNBURG LLP
 750-17TH STREET NW
 SUITE 900
 WASHINGTON, DC 20006-4675

EXAMINER

JOERGER, KAITLIN S

ART UNIT	PAPER NUMBER
----------	--------------

3653

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/13/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/798,265

Applicant(s)

NIEMERG, WILLI

Examiner

Kaitlin S. Joerger

Art Unit

3653

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 March 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-12 and 14-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-12 and 14-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 5, 7, 8, 10, 12, 15, 16, 18, and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Davidson (U.S. Patent 4,235,367).

Regarding claim 1, Davidson teaches a centrifugal drum separator having a vertical axis of rotation, comprising:

- a drum bottom part, 54, and a drum cover, 12, fastened to the drum bottom part by a locking ring, 16, and
- a centering ring, 14, arranged radially between the drum bottom part and the drum cover and axially between the drum cover and the locking ring, see figure 2, such that while the centering ring is being pretensioned by movement of the locking ring relative to the drum cover, it sealingly and centeringly braces the drum bottom part and the drum cover relative to one another; and
- wherein the centering ring includes an elastically deformable material, see column 3, lines 60+.

Regarding claim 2, Davidson teaches that the drum cover engages in the drum bottom part, and the centering ring is arranged between an outer circumference of the drum cover and an inner circumference of the drum bottom part, the centering ring being configured such that the

Art Unit: 3653

centering and sealing is maintained during an operation to a maximal rotation speed, see column 5, lines 23+.

Regarding claim 3, the reference further teaches that the centering ring is axially pretensioned and arranged between an outer circumference of the drum cover and an inner circumference of the drum bottom part, see figure 2.

Regarding claim 5, the reference teaches that the centering ring includes an elastically deformable material and arranged between an outer circumference of the drum cover and an inner circumference of the drum bottom part, see column 3, line 60+ and figure 2.

Regarding claim 7, Davidson further teaches that the drum includes a pressure element which acts upon the centering ring and presses the centering ring upon a collar at least one of at the drum cover and at the drum bottom part, see figure 2 and lip of locking ring, 16.

Regarding claim 8, the reference teaches that the centering ring is arranged above and outer collar of the drum cover, see figure 2.

Regarding claim 12, the reference teaches that the pressure element acts upon the centering ring from above the centering ring, see figure 2.

Regarding claim 15, Davidson teaches a centrifugal drum separator having a vertical axis of rotation, comprising:

- a drum bottom part, 54, and a drum cover, 12, fastened to the drum bottom part by a locking ring, 16;
- a centering ring, 14, arranged radially between the drum bottom part and the drum cover and axially between the drum cover and the locking ring, see figure 1, such that while the centering ring is being pretensioned by movement of the locking ring

relative to the drum cover, it sealingly and centeringly braces the drum bottom part and the drum cover relative to one another; and

- the drum cover engages in the drum bottom part, and the centering ring is arranged directly between an outer circumference of the drum cover and an inner circumference of the drum bottom part, the centering ring being configured such that the centering and sealing is maintained during an operation to a maximal rotation speed, see column 3, lines 23+ and figure 2.

Regarding claim 16, Davidson teaches a centrifugal drum separator having a vertical axis of rotation, comprising:

- a drum bottom part, 54, and a drum cover, 12, fastened to the drum bottom part by a locking ring, 16;
- a centering ring, 14, arranged radially between the drum bottom part and the drum cover and axially between the drum cover and the locking ring, see figure 1, such that while the centering ring is being pretensioned by movement of the locking ring relative to the drum cover, it sealingly and centeringly braces the drum bottom part and the drum cover relative to one another; and
- wherein in an installed position, a pressure element acts upon the centering ring and presses the centering ring upon a collar portion of the drum cover, see figure 2.

Regarding claim 18, the reference further teaches a centrifugal drum separator including a pressure element, see figure 2.

Regarding claim 19, the reference teaches that the collar portion is located on an outer circumference of the drum cover, see figure 2.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 9, 11, 14, and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Davidson in view of Steinacker et al.

Regarding claim 6, Davidson teaches all of the features of the claimed invention except for a drum which includes an inner collar on an inner circumference of an upper ring section of the drum bottom part, wherein an outer collar on an outer circumference of a lower ring section of the drum cover rests on the inner collar. Steinacker et al. does teach this feature, where the outer collar rests on the inner collar for the purpose of further sealing the opening between the drum cover and drum bottom part. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the collar feature as taught by Steniacker et al. in the centrifugal drum of Davidson for the purpose of further sealing the opening between the drum cover and drum bottom part.

Regarding claims 9, 14, and 17, Davidson teaches all of the features of the claimed invention except for a ring disk, but Steinacker et al. does teach this feature. Steinacker et al. teaches a ring disk that covers a gap between an inner circumference of the drum bottom part and an outer circumference of the drum cover in an area above a collar, where the ring disk is for the purpose of preventing possible deformation of the gasket ring to form a fin, see column 4, lines

Art Unit: 3653

6+. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include the ring disk of Steinacker et al. in the centrifugal drum separator of Davidson for the purpose of preventing possible deformation of the gasket ring.

Regarding claim 11, Davidson teaches all of the features of the claimed invention includes an elastically deformable centering ring, 14. He does not, however, teach that the centering ring elastically deformable material includes rubber, but Steinacker et al. does, see column 3, lines 4+. It well know to use rubber as a sealing ring, as taught by Steinacker et al. for the purpose of centering and sealing a gap in a centrifugal drum separator, and therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the centering ring of Davidson out of rubber as taught by Steinacker et al. for the purpose of centering and sealing a gap between the cover and the drum bottom part in a centrifugal drum separator.

Response to Arguments

Applicant's arguments with respect to claims 1-3, 5-12, and 14-18 have been considered but are moot in view of the new ground(s) of rejection.

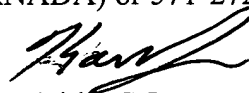
In light of the newly applied reference, the finality of the previous office action has been withdrawn and prosecution has been reopened.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaitlin S. Joerger whose telephone number is 571-272-6938. The examiner can normally be reached on Monday - Friday 9-5.

Art Unit: 3653

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Mackey can be reached on 571-272-6916. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Kaitlin S Joerger
Examiner
Art Unit 3653

11 April 2007